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What is claimed is:

An electrical coupler, comprising:

an inner connector element having opposing ends; an upper end connector and an lower end connector; each end connector respectively coupled to one of said opposing ends of said inner connector element;

a thermally conductive flange circumscribing said inner connector; and

an outer connector element disposed over said inner 10 connector and said thermally conductive flange.

- 2. The electrical coupler of claim 1 wherein said opposing ends of said inner connector element each comprise a bore, in which the upper and lower end connectors are disposed.
- 3. The electrical coupler of claim 1 wherein said thermally conductive flange is brazed to said inner connector.
- 4. The electrical coupler of claim 1 wherein said thermally 20 conductive flange is fabricated from a ceramic material.
 - 5. The electrical coupler of claim 1 wherein said thermally conductive flange is fabricated from the group comprising aluminum nitride and beryllium oxide.
 - 6. The electrical coupler of claim 1 wherein said inner connector element is fabricated from beryllium copper.
- 7. The electrical coupler of claim 2 wherein said upper and lower end connectors are fabricated from beryllium copper.
 - 8. The electrical coupler of claim 7 said upper and lower end connectors are plated with at least one electrical conductor.
 - 9. The electrical coupler of claim 8 wherein said upper and lower end connectors are plated with successive layers of

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nickel and gold.

- 10. The electrical coupler of claim 2 wherein said upper and lower end connectors each comprise a female banana connector disposed therein said bore.
 - 11. The electrical coupler of claim 1 further comprising an upper male connector removably inserted into said upper end connector.
- 12. The electrical coupler of claim 11 wherein said upper male connector is fabricated from a thermally non-conductive material.
- 15 13. The electrical coupler of claim 12 wherein said upper male end connector is fabricated from stainless steel.
- 14. The electrical coupler of claim 12 wherein said upper male end connector is plated with at least one electrical conductor.
 - 15. The electrical coupler of claim 14 wherein said upper male end connector is plated with successive layers of nickel, copper, nickel gold.
 - 16. The electrical coupler of claim 1 further comprising a lower male connector removably inserted into said lower end connector.
- 30 17. The electrical coupler of claim 16 wherein said lower male connector is fabricated from beryllium copper.
- 18. The electrical coupler of claim 16 wherein said lower male connector is plated with at least one electrical conductor.
 - 19. The electrical coupler of claim 18 wherein said lower

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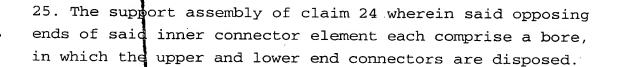
male connector is plated with successive layers of nickel and gold.

- 20. The electrical coupler of claim 1 wherein said outer 5 connector element is fabricated from silicone.
- 21. The electrical coupler of claim 1 wherein a portion of said thermally conductive flange circumscribing said inner connector is exposed from said outer connector element to transfer heat to a surrounding environment.
 - 22. A support assembly for supporting a semiconductor wafer, comprising:
 - a chuck body having at least one electrode embedded therein; and
- a cooling plate positioned beneath said chuck body; and an electrical coupler positioned within said cooling plate and having a thermally conductive flange circumscribing said electrical coupler and disposed upon a surface of said cooling plate.
- 23. The support assembly of claim 22 wherein said electrical coupler electrically interconnects said at least one electrode to chucking and biasing power sources for chucking and biasing said semiconductor wafer.
 - 24. The support assembly of claim 23 wherein said electrical coupler further comprises:

an inner connector element having opposing ends;

- an upper end connector and an lower end connector; each end connector respectively coupled to one of said opposing ends of said inner connector element;
- a thermally conductive flange circumscribing said inner connector; and
- an outer connector element disposed over said inner connector and said thermally conductive flange.

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- 5 26. The support assembly of claim 24 wherein said thermally conductive flange is brazed to said inner connector.
 - 27. The support assembly of claim 24 wherein said thermally conductive flange is fabricated from a ceramic material.
 - 28. The support assembly of claim 24 wherein said thermally conductive flange is fabricated from the group comprising aluminum nitride and beryllium oxide.
 - 29. The support assembly of claim 24 wherein said inner connector element is fabricated from beryllium copper.
 - 30. The support assembly of claim 25 wherein said upper and lower end connectors are fabricated from beryllium copper.
 - 31. The support assembly of claim 30 said upper and lower end connectors are plated with at least one electrical conductor.
- 32. The support assembly of claim 31 wherein said upper and lower end connectors are plated with successive layers of nickel and gold.
- 33. The electrical coupler of claim 25 wherein said upper 30 and lower end connectors each comprise a female banana connector disposed therein said bore.
- 34. The electrical coupler of claim 24 further comprising an upper male connector removably inserted into said upper end connector.
 - 35. The electrical coupler of claim 34 wherein said upper

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male connector is fabricated from a thermally non-conductive material.

- 36. The electrical coupler of claim 35 wherein said upper 5 male end connector is fabricated from stainless steel.
 - 37. The electrical coupler of claim 35 wherein said upper male end connector is plated with at least one electrical conductor.
- 38. The electrical coupler of claim 37 wherein said upper male end connector is plated with successive layers of nickel, copper, nickel, gold.
- 5 39. The electrical coupler of claim 24 further comprising a lower male connector removably inserted into said lower end connector.
- 40. The electrical coupler of claim 39 wherein said lower 20 male connector is fabricated from beryllium copper.
 - 41. The electrical coupler of claim 39 wherein said lower male connector is plated with at least one electrical conductor.
 - 42. The electrical coupler of claim 41 wherein said lower male connector is plated with successive layers of nickel and gold.
- 30 43. The electrical coupler of claim 24 wherein said outer connector element is fabricated from silicone.
- 44. The electrical coupler of claim 24 wherein a portion of said thermally conductive flange circumscribing said inner connector is exposed from said outer connector element to transfer heat to a surrounding environment.